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A PLEASANT TRIP TO BREVARD.

The Railroad Meeting—Improvement of the French Broad River—Mountain Scenery, &c., &c.

MR. EDITOR: In order to attend the railroad mass meeting at Brevard, N. C., held on the 16th inst., in behalf of the Easley, Belton, Williamston and French Broad Road, it was necessary that the Blue Ridge mountains should be crossed. Hence, we chose the route along the survey of Capt. Kirk for the aforesaid Road. This survey was made thirteen months before to the North Carolina line, but the Directors had ordered a completion of the survey to the valley of the French Broad, and had employed Maj. T. B. Lee, an old and well-known Civil Engineer, to accompany Capt. Kirk and verify said survey. This was done to the entire satisfaction of the Directors, and confirmatory of the general fidelity and correctness of Capt. Kirk's previous survey. This was very gratifying to all the parties concerned, and to none more so than the officers of the Road. The meeting at Brevard was largely attended by the citizens of Transylvania and adjoining counties, and an enthusiastic interest manifested in the enterprise. On that side of the mountains there seemed to be no croaker, and the people there are resolved to do their utmost to meet the South Carolinians on the top of the Blue Ridge. Capt. Ephraim Clayton, of Asheville, an old and experienced contractor, presided over the meeting, and Gen. Vance, Capt. Atkinson and others added greatly to the interest of the meeting. The President of the Road, Col. R. E. Bowen, introduced the subject of the meeting by giving a brief history of the Road from its inception to the present time. Then followed Maj. Lee's report, certifying to the general correctness of Capt. Kirk's survey, and verifying the astounding fact that the Blue Ridge can be crossed at the Eastatoe Gap, with an average grade on this side of 65 feet to the mile, and down on the other side to the valley of the French of 70 feet to the mile; that the work on this mountain section is remarkably free from rock, and, except in one or two intances, of no great magnitude, and can be accomplished at an average cost of three thousand dollars per mile; that the country through which the Road will pass is rich in mineral ores, gold, iron, coal, corundum, mica and lime inexhaustible; that with convict labor the Road can be built at a cash advance of 25 per cent. on the original cost, and that the whole Road from Belton to Asheville, N. C., a distance of 99 miles, can be graded at a fraction over three hundred thousand dollars.

Asheville, like Atlanta, is a sort of converging point for all the Western roads, reaching out from North and South Carolina and Georgia for the trade of the great West. From Asheville to Wolf Creek, a distance of some 40 miles, will be the only remaining link to bring us in connection with the great net-work of railroads, running East and West, and North and South, and connecting the lakes of the Northwest with the cities of the South Atlantic. Wilmington, Port Royal, Charleston and Savannah will all reap a rich reward from the proposed rail connection with Asheville. Atlanta and Charlotte, two rival inland towns of great commercial importance, will also have opened to the enterprise of their merchants a new and important field of trade.

After the reading of the report, Col. W. S. Pickens, of Anderson County, S. C., made one of his best speeches in behalf of the enterprise. He told the people of North Carolina that we came to them in behalf of the enterprise, not as speculators, not as foreign adventurers, but as farmers, and an important component part of the body politic, having no interest diverse from theirs in this enterprise. The Colonel's speech was pointed throughout, and produced a marked effect upon the audience.

Gen. Vance followed in one of his happiest efforts, pledging the great State of Buncombe to the performance of her whole duty in the prosecution of this great enterprise; that at five cents per head, every acre of cabbages would bring $200; that he was born and raised in an apple orchard, and that with railroad facilities, the production of apples would become an important, pleasant and remunerative employment; that Buncombe could make as fine tobacco as the world produced, and that about half a million worth had been shipped from Wolf Creek the past season; that the valley of the French Broad was an asylum for the invalid of every clime. He rejoiced that here, at least, was the safe and sure retreat from cholera, yellow fever, &c.; that her mountain scenery was unequalled; that her pure, gurgling waters, bursting in a thousand rivulets from her mountain sides, was the greatest boon ever conferred on mortal man; that he was in favor of all railroads—was a great friend of the Spartanburg & Asheville Road, and equally a friend to the proposed Eastatoe Gap Road; that it could and would be built.

He was followed by Col. Russell, Capt. Atkinson and Col. Hatch, all urging the importance of the enterprise.

Capt. Atkinson is largely engaged in the apple culture—took the premium at the Centennial—and produced an apple at Brevard, called the yellow pippin, which weighed 24 ounces. He exhibited another apple nearly as large, which was propagated on the Edisto near Charleston. He is a member of the Legislature from his county, a man of great energy of character, and a host at anything he undertakes.

Col. Hatch formerly lived in Charleston, but claims to be a North Carolinian now, and intensely anxious for the completion of the Road. Said that by completing this Road to Charleston and Port Royal, it would connect the West with the West Indies and South America, as they were directly on the highway to those countries.

A very encouraging letter was then read by the President from Mr. Haymond, the great railroad man of Indiana, indicating that when we needed it, a plenty of help could be had for the completion of our Road.

Mr. R. W. Hume, formerly of Charleston, but long a citizen of Transylvania County, introduced a resolution, which was enthusiastically adopted, pledging the people of the French Broad to do all in their power for the prosecution of the enterprise.

The meeting was then closed, at a late hour, amid the general rejoicing of the friends of this great enterprise.

The delegates from South Carolina were invited to remain over a day and enjoy the pleasure of a boat ride down the French Broad a few miles, to see the progress of the work now being prosecuted, by means of jetties, dredging and blasting, to so deepen the minimum depth of the stream, so that a light steamer could ply safely up and down the river for some 30 or 40 miles. Indeed, it is proposed to prosecute the work to Asheville, but the Long Shoal, some 25 or 30 miles below Brevard, is thought by the Superintendent to present difficulties of too great magnitude to be undertaken. It is proposed to get a depth, at low water, of three feet, which, it is said, will be sufficient for light steamers. This important work is the result of an appropriation, by the last National Congress, of $25,000, to be devoted to the improvement of the French Broad River. For this the people are mainly indebted to the exertions of Gen. Vance, their popular representative. We South Carolinians, after seeing the effectiveness of the work on the French Broad, have returned home fully impressed with the belief that the same thing could be done along the bed of the beautiful Savannah and its tributaries. We may yet live to see the day when steamboats will run the Savannah, Tugaloo and Seneca a considerable distance. So mote it be. The party composing the excursion consisted of Gen. Vance, Capt. Clayton, Capt. Kirk, Col. Pickens, Col. Russell, Capt. Hume, Capt. Averill, the chief superintendent of the work, and a boat hand. Capt. Averill did everything he could to make our ride pleasant and instructive. And the memory of Capt. Hume will ever be fresh in our hearts for his kindness in getting up this excursion.

A THRILLING TRADITION.

As we glided smoothly along the beautiful waters of the French Broad, Capt. Clayton related a thrilling story of a little war that took place on its banks perhaps a century ago, of which history gives no account. The territory lying along the banks of this River was once claimed by the Georgians, and they actually laid out a county, calling it Walton, which was stoutly resisted by the tar-heels, finally resulting in a battle between the parties, in which one man was killed and several captured. The North Carolinians, after obtaining reinforcements, returned to the charge, and, in the second rencontre, got the best of the Georgians. Finally, the dispute was amicably adjusted, and this beautiful French Broad Valley became part and parcel of the old North State.

THE PROPOSED TERMINUS.

Capt. Averill proposes for the present the mouth of Mud Creek as the terminus of steamboat navigation, at which point he desires a junction with the Spartanburg and Asheville Road. This is about 28 miles from Brevard. He will not be able to prosecute the work longer than the middle of October, as the weather will then be too cold for the hands to work in the water. They are in the water the whole time up to their crotch, and yet there is no complaint of sickness. Water hands get one dollar per day, and work eight hours; the other hands get seventy-five cents. There were eight double teams employed in dredging the bottom of the French Broad with the common iron scoop. Other hands are employed in blasting. In three feet water they will drill the holes with the utmost precision, and, after a sufficient number of drills have been bored, they are all charged with dynamite cartridges, water-proof, and fired by electricity. The electric battery is placed a safe distance away, and connected by wire with the charge. As soon as the battery is charged the explosion takes place, throwing the loose rock and sprays of water some ten feet above the surface. Gen. Vance was afforded the opportunity of firing off one blast, which did considerable execution. Capt. Averill has a floating hotel and blacksmith shop, which follows the hands closely in their operations. The jetties are something like, in a small way, the Eades jetties, which have done such great execution in deepening the bar off New Orleans harbor, and are now being tried on the Charleston bar. They are constructed of pens of heavy logs, some 6 feet wide by 10 to 15 feet long, buried beneath the bed of the river and filled with rock. These jetties have a tendency to deepen the waters of the centre of the river, and distribute an abrupt fall in the stream to a uniform velocity for a considerable distance.

MOUNTAIN SCENERY.

As we approach the Blue Ridge from the South, Bald Knob, Table Rock and Cæsar's Head stand looming up before the traveller, with their elevated peaks towerig in the sky, in dignified grandeur and silence. Bald Knob is said to be higher than the Table Rock. These mountains, which have been the admiration of the world for a century, lie mighty to the right of the proposed Eastatoe Gap Road, and will no doubt become places of great resort for the pleasure seeker and invalid on the completion of this enterprise. However grand the scenery on this side the Blue Ridge, it is eclipsed as we descend the French Broad on the other side. Peak after peak, and range upon range, lie upon each other, and each apparently striving for the mastery in the grand panorama. The highest peak perhaps in the United States is Mitchell, called after a distinguished tourist who lost his life in its exploration. His remains lie upon the summit. It is 6,700 feet above the sea. The purest water gushes from these mountain sides in ten thousand rivulets, freely dispensing their life-giving properties to man and beast.

The following extracts from the letter of a correspondent to the (Columbia) *Southern Presbyterian*, describing Western North Carolina, are graphic and true to the letter: X.

In support of the truth of this statement is the following testimony of Professor Guyot, of the College of New Jersey, who is an authority in such matters. After describing this mountain region in its general dimensions and most striking features, he says: "Here, then, through an extent of more than one hundred and fifty miles, the mean height of the valley from which the mountains rise is more than 2,000 feet; the mountains which reach 6,000 feet are counted by scores, and the loftiest peaks rise to 6,700 feet, while at the North, in the group of the White Mountains, the base is scarcely 1,000 feet, the gaps 2,000 feet, and Mount Washington, the only one which rises above 6,000 feet, is still 400 feet below the height of the Black Dome of the Black Mountains. Here, then, in all respects, is the culminating region of the vast Appalachian system."

The first striking characteristic of this region is its mountains, which are distinguished by elevation, variety of chains and groups, the countless number of peaks and knobs, fertility of soil, and luxuriance of vegetation, and by a general aspect, not of rugged and melancholy desolation, but of mingled grandeur, verdure, beauty and loveliness. On the west is the chain of the Great Smoky Mountain, the crest of which is the dividing line between North Carolina and Tennessee. On the east is the Blue Ridge; between these are numerous transverse or cross chains, and east of the Blue Ridge are divers spurs, such as the Tryon range. These constitute four distinct classes of ranges and elevations, the whole forming the mountainous region of North Carolina, which, entering the State from Virginia, continues through its extreme western part into Georgia. The length of these highlands lying in North Carolina is about 180 or 200 miles, with an average breadth of 40 to 60 miles.

The most elevated of all the chains is the Black Mountain, which is a cross chain northeast of Asheville and the valley of the French Broad. It contains a number of lofty peaks, the highest of which is Black Dome, (or Mitchell's High Peak, or Clingman's of State maps,) 6,707 feet, being the most elevated point in the eastern division of the United States. The peak takes its name from the dark color of the balsam firs which, above a certain line of elevation, grow thickly and luxuriantly, and covers its sides and summit. On the latter is the grave of Professor Mitchell, of the University of North Carolina, who lost his life in exploring the peak in 1857, and whose remains were buried on its top. There is another peak called Mount Mitchell, but it is four miles distant from the other, and 125 feet lower. The distance of the Black Dome from Asheville is about 25 miles.

The Grandfather mountain is a peak of the Blue Ridge still further to the northeast from Asheville, measuring 5,897 feet, and is the highest summit of that chain, though twelve other peaks are over 5,000 feet. Mount Hardy, southwest of the French Broad, was once regarded as the highest peak of the Blue Ridge, but the Grandfather has been found to be the highest.

This is the view expressed by Professor Guyot, who says: "Beyond the French Broad rises the most massive cluster of highlands and of mountain chains. Here the chain of the Great Smoky Mountain, which extends from the deep cut of the French Broad at Paint Rock to that not less remarkable of the Little Tennessee, is the master chain of that region of the whole Alleghany system. Though its highest summits are a few feet below the highest peaks of the Black Mountain, it presents on that extent of sixty-five miles a continuous series of high peaks, and an average elevation not to be found in any other district, and which give to it a greater importance in the geographical structure of that vast system of mountains. The gaps or depressions never fall below 5,000 feet, except towards the southwest and beyond Forney Ridge, and the number of peaks, the altitude of which exceeds 6,000 feet, is indeed very large.

"On the opposite side to the northeast, the Blue Ridge also offers its greatest elevation in the compact cluster of mountains which fill the southern portion of Haywood and Jackson counties. Mount Hardy, in the Blue Ridge, which, according to Mr. Buckley, rises to 6,257 feet, though this elevation may be found too great, seems to be the culminating point of the Blue Ridge."

Six principal rivers, with numerous tributaries, take their rise in the western slopes of the Blue Ridge and in the cross chains, and after passing in deep gorges through the Smoky Mountain range, help to form the great continental stream of the Tennessee River, which, after flowing a thousand miles, empties into the Ohio at Paducah, Ky. These are the Hiwassee, Little Tennessee, Big Pigeon, French Broad, Nolechucky and Watauga. Another, New River, having its head-springs in and around Grandfather Mountain, flows northward through Virginia into the Kanawha River, which empties into the Ohio. Each of these rivers drains a basin or valley of considerable extent, bearing severally the name of the river that runs through it. The soil of the river and creek bottoms is usually fertile, and the same is true of a large part of the hills and mountains. In many cases they are cultivated on the sides and summits.

That botany of this mountain region is deeply interesting, the forest being rich in trees, flowers, ferns and mosses; while the scenery is peculiarly beautiful and pleasing. Says Dr. Curtis, "In all the elements which render mountain scenery attractive, no portion of the United States presents them in happier combination, in greater perfection, or in larger extent, than the mountains of North Carolina."

Minerals abound, as gold, copper, iron, mica, corundum; but there is little silver and no coal.

This mountain region needs only to be known and rendered easily accessible in order to be visited, appreciated and enjoyed. With the spread of the fame of its beauties, and with increased facilities of approach, it will become the resort of tourists, health and pleasure-seekers, and sportsmen, in large numbers. The tide of travel and influx of visitors are annually increasing. Two railroads have penetrated nearly through the Blue Ridge, and are being pushed forward to Asheville. Persons leaving Atlanta or Charleston at 4 or 5 o'clock in the morning are able to reach Asheville at 10 or 11 o'clock p. m. of the same day.

GRAPE CULTURE IN AMERICA.

The History of Three Centuries of Unsuccessful Effort—What are the Constituents in Grapes Necessary to the Production of Wine—The Cost and Profit of Vine-Growing.

By Dr. G. B. Lartigue, Blackville, S. C.

Grape culture and wine-making, from the earliest periods in our history, have received great attention. The Spaniards called the country Florida; the French named it New France, impressed with its great resemblance to their native wine-growing countries.

In 1667, in the charter from Charles II to the Lords Proprietors, wine, silk, raisins, currants, oil, olives and amonds, produced here and exported to England, were free from customs dues. Free passage was granted at the same time to Frenchmen skilled in making wine, with their families and goods. By 1682 five kinds of native vines had been described, good wines had been made, and many vineyards planted with imported vines.

In "Oldmixon's Carolina" (London, 1708,) he conveyed the idea that wine-making was not profitable. In 1763, "Madeira wine and punch were the common drinks of the inhabitats;" yet few gentlemen were without their French, Spanish and Portuguese wines. In the exports of 1747 and 1748 there were no native wines, while large quantities of foreign wines were sent to England.

From Ponce de Leon's discovery of this coast in 1512, to the middle of the Eighteenth Century, numerous well directed efforts failed to make this a wine-producing country. In the succeeding hundred years the results were not encouraging. In a letter recently received from Mr. A. De Caradeuc, now of Charleston, he says: "For making wine the grape culture was commenced in 1842–43 by Dr. McDonald and myself near Aiken; others followed. On account of the difficulty in procuring cuttings, and of the scant means at our disposal, it was several years before we made wine, and even then under immense disadvantages. The vines we cultivated were of American species; although, at the time, several were known under foreign names, but with a better knowledge of them, I soon traced their origin to be American.

"We also imported some forty or fifty European varieties, French, Spanish, Italian, German, all of which invariably died out after two or three years; one or two sheltered from our too heavy dews, under a piazza, continued to bear fruit for four or five years. Some valuable hybrids have no doubt been obtained at the present day, but I know little of them.

"Until 1861 the culture of the grape was eminently successful and promising in our State, the fruit matured to perfection without rot or defects, the juice of all, with the exception of the Scuppernong, containing all ingredients necessary for a first quality wine. * * I never added sugar or spirits to my best wine; it kept well and improved with age. The largest and best crop was in 1861; the yeild was abundant, the fruit superb, the wine delicious. * * After that year the grapes commenced to rot, and continued to do so. * * This rot seems to have been general throughout the country—North, South, East and West. I considered the cause as climatic and not in the soil, as fruit sheltered from dews never rotted. At first it was thought California was exempt from it. Could a remedy be found for it, no crop would pay better, and none would be more pleasant to make."

Gen. Naglice, of San Jose, California, and experienced vine culturist, stated in 1872 that in two years out of five the grape crop in his State was a failure. A writer in the *Plantation*, an agricultural journal recently publish in Georgia, after forty years' experience, say "Grape culture in all the Southern States is a dead failure," and almost every one of the many who has written on the subject during the last fifteen years virtually acknowledges this, in stating that the vines are short-lived, that the grapes rot, that they have too much acid in them and too little sugar. Many of the writers have had contradictory results, as their experience, in the different processes of planting, cultivating, pruning, manuring and training, and as to the variety best suited to each locality.

To discuss these matters, to attempt to reconcile differences, and to deduce correct conclusions as to the most proper course, would be an onerous undertaking. Yet with these facts before us, we would be recreant to our trust were we, without grave consideration, to endorse by action, or encourage by words, grape culture as one of the approved industries of the country. Changes in the industrial pursuit of any country must be gradual, and to introduce a new agricultural industry it must be adapted to the soil, the climate, and the genius of the people.

First, we assume it as an established fact that wine in the Southern States is not yet one of the staple productions. Now we would inquire if it is possible to make it so, and then would it be profitable?

Of the various fluids called wines, that which is the simple fermented juice of the grape, to which nothing has been added, and from which nothing has been taken by other than natural processes, may be called "Natural wine;" on chemical analysis yielding water, alcohol, tannin, cream of tartar or bitartrate of potash, tartaric acid, grape sugar and œnanthic ether. This natural wine may be considered the type of all true wines, although its various specimens are very dissimilar. Of this we must believe the Lord partook at the "Last supper," and of such, we presume, would all Christians partake in the celebration of that holy sacrament.

Wines of this kind were at one time the common productions of all grape-growing countries. At present it is a difficult matter to procure a specimen of it.

In 1861, Mr. A. Harnozthy, authorized by the State of California, travelled over Europe to report on grape culture and wine-making. At Hochheim, in Germany, he found a wine very carefully made, especial rules and regulations being enforced by the government to assure its quality. This wine was worth from one to six dollars a gallon. The wines produced at the vineyards of the Duke of Nassau and the famous Johannesburg, from Count Metternich's estates, commanded fabulous prices, and from the processes of manufacture, as described, are in part natural wines; the choicer qualities being made from selected fruit in years of exceptional growth. In nearly every other instance there are grounds for believing that the wines have been tampered with.

Wines to which something has been added before, during or after fermentation to correct certain disagreeable qualities of the wine, constitute another class. Should the wine be unpleasantly sour, from too much tartaric acid, it may be ameliorated by the addition of potash and lime, which would form insoluble compounds with the acid and be deposited in the cask, as argal or cream of tartar, or a sufficiency of water is added to reduce the sourness of the fluid to an agreeable standard, then a quantity of sugar is added to make the mixture show a percentage of saccharine matter sufficient to generate alcohol in quantity equal to that contained in the wine which this fabricated article is to simulate. These processes have been in use, in more or less degree, for ages. Pliny makes mention of the mixture of honey with grape juice to strengthen it, and Aristæus taught this method. Different substances were used, "salt, sea water, ashes, chalk, gypsum, raisins, and, later yet, potassa, brandy and water." The use of these articles were secrets of the trade, carefully kept and handed down as heirlooms in the family.

From the year 1768 to the year 1849, French, English and German scientific men were interested in the fabrication of wines, and at this day nearly all the wines of the world are Chaptalized or Gallized make, by processes advised by Chaptal and Gall, being simply an addition of water and grape sugar, made from potatoes, to grape must. These fabricated wines possess great similitude to natural wines of the better class, and are often in taste and quality supposed to be better than natural wines from the same grapes.

Still another variety of so-called wines is made by the fermentation of succulent vegetable matter with sugar and water, chemical products being added to give agreeable qualities, oftentimes with no grape juice in the mixture, its œnanthic ether being derived from the distillation of castor oil with potash. We may call this spurious wine; of it large quantities are made and consumed in Germany and France, one-half of the quantity of the wine consumed in in Paris being spurious.

These various processes or amelioration, fabrication and adulteration, may be more or less employed; distilled liquors may be added, as in Madeira, sherry and port, the wine may be impregnated with carbonic acid gas, as in champagne, either by natural or artificial processes, or with laughing gas; the mash may be boiled to a syrup and then fermented, or the wine may be made form some fresh juice, sweetened with sugar and diluted with water.

We essay to speak only of natural wine, of which some fair specimens have been made in this region. The great difficulty, however, is to produce from the same vine in the same locality for a lengthened term of years, a wine which will approximate any given standard of excellence.

It is an acknowledged fact that *lusus naturæ* sports and hybrids are not as permanent in their existence as their parent stocks. There is a wide opening for research in these matters, as well as into the true period of the life of plants propagated by cuttings, buds, layers and grafts. Such investigations would have practical bearing in illustrating many agricultural and horticultural subjects; for instance a seed of the *Vitis Labrusca*, a variety of grape indigenous to America, uncontaminated, should perpetually reproduce itself. But the orginal plant from which the seed came must, in the course of nature and years, die. We have no right to suppose that plants from this original, propagated by cuttings, buds, layers or grafts, would outlive the parent stock, circumstances being the same.

It is supposed that the Catawba, once so popular, was a sport, a hybrid of the *Vitis Labrusca*, in which case the cuttings, buds, lagus or grafts from the original Catawba, should follow its career and live no longer than its immediate parent, and not so long as its remote parent, the *Vitis Labrusca*, unless its parent from the other stock was longer lived than the *Vitis Labrusca*. We can, with no certainty, expect that plants from a Catawba seed, unaffected by pollen from another variety of grape, will be identical with the original Catawba, it being, as assumed, a sport or hybrid; but the resulting plant may be a new variety, possibly weaker in vitality than the Catawba, its status having been lessened by its original abnormal generation, while a hybridized seeding might vary still more and suffer greater deterioration, or possibly be strengthened by the plant supplying the pollen.

In view of these facts, hypothetical though they may be, we need have no great surprise at the failure and death of our Catawbas, and of other varieties, by analagous processes.

As set forth in Mr. De Caradeuc's letter, about the year 1862 a general failure of the vines of the country commenced, which has continued up to the present time, as evinced by the numerous articles in the Southern agricultural journals, wherein one experienced vine-grower suggested a new set of vines every eight years, another shallow planting, some advocating close pruning, others that the vines should run at will on trees, some proposing the adoption of Pasteur's system of ripening vines, and others that of De la Henreuse.

In foreign countries the life and productiveness of the grape is variable; the Oidium and the Phylloxnia committing great ravages, while all the vines in the Island of Madeira have died in recent years. Vines were planted there in 1420, and have frequently been replanted.

A vine said to be the largest in the world grew at Santa Barbara, California, and showing by its decay that its term of life had been almost accomplished, it was dug up, and exhibited at the Centennial at Philadelphia in 1876. From reliable accounts it was but 50 or 60 years old, while a cutting from it now grows at Santa Barbara, being 16 inches in diameter three feet from the ground when 16 years old. This extraordinary growth is abnormal, and should not be considered in forming an idea as to the age or size a grape vine may reach. The size of the vine, however, serves in general to assist in estimating its age. The doors of the Temple of Ravenna were made of plank twelve feet long and fifteen inches wide from the trunk of a grape vine, as also were the columns of Juno's Temple at Metapont, and a statue of Jupiter.

In Europe, the bearing age is from 10 to 30 years, while more lengthened periods are claimed for some localities. One vine in Burgundy was said to be 400 years of age. Some Italian vineyards 300 years old are said still to bear and flourish, while the ancients gave to the vine a longevity of 600 years.

In this connection the idea I would develop is this, that notwithstanding the great age to which an original seedling of a pure variety and its offshoots may live, its crosses, hybrids and sports, propagated as offshoots may disappoint us in quality and durability, after having for a time given great promise of success, and that the so-called failures in grape culture in this region, the results of spasmodic efforts, have been the counterpart of like failures in Europe from time immemorial, as we find from examining the history of its grape culture.

We should not regard these failures as decisive, but they should enter into a consideration of the possibility of success in making vine-growing an established industry.

But what would be a success? And what tribunal should sit in judgment?

It might be a harbinger of success if our vine would compare favorably with European specimens. In 1873, at the Industrial Exhibition held at Vienna, eighty-two specimens were offered by twelve exhibitors. The opinions of the British, French and Swiss Commissioners are published, and should, it is supposed, fix the grades of American wines. But the awards as issued convey no idea of the value of the wines, nor of any other American products exhibited for there were 442 awards granted to 654 exhibitors. Of these none were of the first grade for wines. Of "medals for progress," that is for improvement over former exhibits, four were awarded, three for the class of "merit," and diplomas conferring honorable mention were issued to the exhibitors, there being nine awards to twelve exhibitors of wine.

In the abstract of the report of the commissioners, we find no high estimate placed on the wines, to which these awards were granted; in almost every instance there is an open sneer, or concealed sarcasm in alluding to them; while the Editor of the reports in commiseration for our deficiency "has not hesitated to omit all that was plainly erroneous, or which appeared prejudiced." Thus, with the best opportunity we have had before the world, we have made no position for our wines.

Some of the wines on exhibition were possibly pure and natural, but probably the greater number of them were of the class we have called "fabricated." The standard wines, those from the drinking of which the experts had acquired their taste, may have been of similar grades, some natural, some fabricated. How worthless must have been such a test. We know we can make a good imitation of wine, a substitute, but we wish to know if we can with certainty and profit make such as the Son of God blessed, and for which no fabricated article can be substituted.

To make the true, natural wine its constituents must exist in the grape. As variable as are wines in flavor, strength and durability, to be good of their class the grapes should have in them water, sugar, acid, salts of potash and lime, and tannin in proper proportions. If we examine a green grape we find in it an intensely sour fluid, with some pulpy matter around the seeds. This, by gentle changes in the laboratory of nature, is in time in great part converted into a pleasantly sweet and slightly acid juice. If this change is effected to but a limited extent, the fermented juice makes a weak sour wine, but if the ripening of the fruit has progressed favorably we may have an agreeable wine.

The ripening and perfection of the fauit is the *sine ua qnon*, and this process, complicated as it is, has to be studied and guided to a successful conclusion before an assured success can be hoped for. The acid of the grape is mostly tartaric; this acid is very soluble in water, but when brought into combination with potash and lime it forms chemical compounds but slightly soluble in cold water. In the process of ripening the tartaric acid gives up some of its component parts to the potash and lime in the grape, while the uncombined parts of the acid seek a new combination with other constituents of the grape and assist in the formation of sugar. If, however, the potash and lime should not be in the proper quantity and in place at the proper time to enter into combination with the tartaric acid, the wine will be unpleasantly sour, and from the scarcity of sugar there will be a corresponding deficiency of alcohol.

It may be regarded as axiomatic that vital processes, persistently interfered with, either through deficient or superabundant nutrition, will result in disease, perhaps in death. It is possible that the comparatively short lives of some vines, and the diseases and imperfections of the plant, are in great degree attributable to something of the kind. If the soil cannot supply the proper amount of the necessary inorganic matters to perfect the organic constitutions of the plant, the production must be deficient in quality or quantity, or derhaps in both.

True, natural wines have been produced in greatest perfection on volcanic formations, and in localities were potash and lime are available constituents of the soil; the use of manure containing them has been practiced in all conntries. Their application, however, to soils in which they are deficient, must not exclude from consideration other chemical and vital influences. Wines are stronger, more durable and less acid in hot regions than in cold ones; while the distance of a few paces make a great difference in the product, explicable by change in the constituents of the soil, radiation of headt hygrometrical condition, texture of the soil, drainage, or some undiscovered cause. On the detrmination of these matters the treatment of the vine depends. In earths which yield in excess potash and lime the vine may succeed best if allowed to run riot in the trees, but if the supply is scant and the greater part of it is absorbed by the wood of the plant the dose or charge for the season may be so fixed that it is not available at the period of ripening; to antagonize this close pruning should be practiced. The depth to which the roots should penetrate the ground is at the same time to be determined in part by the constituents of the soil as available at variable depths. I say available, for although the quanty of lime, potash and other inorganic substances may be sufficient to last eight to six hundred years, still if these substances are in such chemical combination that the plant cannot absorb them in sufficient quantity they are useless. As well might we expect a vine to flourish in a glass tumbler filled with foul water and marble chips, the potash in the glass and the lime in the marble being unavailable.

The experience of the past establishes the fact that where these substances are scarce the wine is inferior in quality and the vines are short-lived. Practically the remedy has often been applied in the shape of some alkali to the juice to neutralize the acid, and sugar to impart alcoholic strength.

But it would be better in localities where it is intended to make wine that the deficient constituents of the soil should be added as manure and assimilated by the plant in accordance with the laws of nature.

We find indigenous to this region the Bullace, or Bull grape, a variety of *Vitis Rotundifolia*, different in many particulars from all European vines, but so like the "Aleric," a grape of Greece, that Semmes of Florida, claimed that origin for it. Of this variety, a sport, the Scuppernong, has from its hardiness and great bearing qualities especially attracted attention. It has been considered a poor wine grape because of its excess of acid and its deficiency of sugar. It runs largely to wood, and dies under the ordinary system of pruning; but recent experiments indicate that it may stand pruning while in leaf during the fall. Should this be so, it, with its good qualities preserved and its imperfections removed, may prove the most valuable of all grapes to us, and produce in great perfection and abundance a sparkling wine; a quality of which, highly esteemed, can be made at present from it.

Our inquiry as the possibility of making vine-growing one of the established industries of the country, has so far resulted only in prominently bringing forward the positive necessity of presence of lime and potash in the soil in sufficiently large and valuable quantities. The importance of this must be recognized, otherwise no progress can be made; but we never can expect that all localities will be equally suitable for wine, as seem to have been the vain hope of the great majority of those who have planted vines.

Can wines be profitably produced by us? This question cannot properly be answered with no established market, with prices so variable, with cheap beers, mean liquors and spurious wines in competition.

For the production of pure, natural wines we may thus roughly approximate the cost:

Land 200 acres—one-half of which for general purposes and the other half in grapes, at $10 cost per acre	$ 2,000
Necessary dwellings of all kinds on the farm, at least	5,000
Amounting to	$ 7,000
This being unproductive for at least three years, add interest at 10 per cent	2,100
For preparing the ground, plants, planting, fertilizing, training, pruning, for three years, $40 per acre	4,000
Showing as expended in three years without income	$13,100
In five years bearing, current expenses thus:	
Interest on $13,100, say at 7 per cent. only	4,585
Ten dollars per annum per acre, for cultivating, manures, repairs, post stalkes, work, resetting, &c., &c.	5,000
One thousand dollars per acre, for expenses of vintage	5,000
Amounting to	$27,685

During the term of eight years, this sum has been expended and possibly more, with no return from the investment; the wines being unsold because not yet mature.

These estimates may not be correct, but are near enough to calculate that if the average production yearly amounted to 200 gollons per acre, in five years the 100,000 gallons produced would have cost at least 27 cents per gallon.

Should then a market be found and the sales of wine commenced, even at the rate of 50 cents per gallon, the vintage of the first year, 20,000 gallons, would realize $10,000; in four the sales will have amounted to $40,000, which will have repaid the original investment with all interest and the current expenses, leaving one year's production of the first five years on hand, increased by the production of four years more, making 100,000 gallons, worth say $50,000, as clear profit, in addition to the original investment.

This is an encouraging exhibit for pure, natural wines but we are constrained to note that the husks and pulps may have had in the meantime added to them about 140,000 gallons of water, with 420,000 pounds grape sugar, made from potatoes, at a cost of materials and labor, say twenty thousand dollars, thus producing about 180,000 gallons of a fabricated wine, worth as much in market as natural wine; a wine which only the most expert of modern chemists can distinguish from the first product, and as far as human judgment has been able to dertermine, as good. Even this product can be increased by another doubling.

This most extraordinary exhibit, equaling in apparent extravagance the description of the visit of Sinbad the Sailor to the valley of diamonds, may in time be realized, but only by wise adaptation of means to the end. Individual effort, ill-advised, with inadequate means, and with a limited time in which to realize an income, almost surely will result in disappointment; but capital directed into this channel, properly guided, may, I earnestly believe, be used to great profit.

A ROPE WALKER DROPS A BOY FIFTY FEET.—A few days ago the *Herald* casually mentioned that an Ogden tight-rope walker would undertake the feat of breaking his neck if a sufficient collection could be raised to pay his funeral expenses. Though the intimation did not prove true, it is rather a matter of regret, as one younger and proportionately more innocent suffers from the foolhardy exhibition. Last night was the set time for the feat, and in addition to walking the rope at a great height, Megginson, the rope professor, proposed to carry a twelve-year old boy on his back across this rope, to stand on his head upon it, to lie down on his face balancing the pole over his back, and to carry two pails of water from one building to another. The rope was stretched across Main street. He commenced his exhibiton, and while endeavoring to carry the boy across he lost his balance and dropped him to the pavement, fifty feet below, after having walked within ten feet of the end. The rope was on an incline of about three feet. In stepping on this incline the professor seemed to lose his balance, the pole swinging to a perpendicular, and almost instantly after the immense concourse of people who had assembled to witness the affair were horrified to see the boy whirling through the air, striking his head with a sickening thud. Megginson threw himself over, catching the rope with one hand in his fall, and after hanging a few seconds in midair, succeeded in gaining a window, going hand over hand. The boy, whose name is stated as William Allen, is said to be a son of the marshal of Junction City, Kansas. It is alleged that he ran away from home and was taken up by the traveling performer, many exhibitions having been given successfully. The boy struck the pavement on the right shoulder and head, partially dislocating the neck, and causing concussion of the brain. He is still alive, but no hopes are entertained of his recovery. Megginson was arrested.—*Salt Lake (Utah) Herald, Sept. 9.*

— The bell-punch law is shutting up many saloons in Dallas.

— Texarkana, which lies in two States, is about to become the county seat of the adjoining counties.

— Students who take the benefit of the Texas State normal school are required to teach five years.

THE LATEST FOLLY.

How Women Tattoo Their Legs—The Way it is Done in Philadelphia.

The item which was published in the London *Times*, and which was generally copied in this country, relative to the elopment of the daughter of a nobleman, in which occurred the sentence, "She can be fully identified by a cross tattooed on the righ leg just below the knee," has served to call out in this country from the press a general condemnation of the practice, which was known to be largely indulged in by English and French women.

In order to learn whether the tattooing was carried on to any extent in this city, an *Item* reporter last week made a tour of discovery, in which he was very successful. Among the first visited was a young physician, who said: "The leg mark referred to in reference to the eloping young damsel would be a poor means of identity in this country, for I know of a number of young ladies in this city who have their limbs decorated in a similar manner. During my brief time of practice I can say that I have met with very many cases. Two young wives whom I attended recently had crosses tatooed on their limbs, and one young lady of whom I know had the initials of her favorite suitor pierced in the skin just above the ankle." A younger practitioner said he had met with numerous cases lately. Among the most favorite devices are serpents with their tails in their mouths, forming a ring, which are tattooed in just above the knee.

Among the demi-monde he had seen "any number of cases." He stated that most of the female tattooing was performed at the house of the patron, by a woman whose name he did not know. He was of the opinion that tattooing would spread like wildfire since that paragraph about the young English woman had appeared.

Being anxious to gain all the information possible relative to this barbaric custom, an *Item* reporter started out in search of the woman referred to, who was finally found in an unpretentious but neat house in the vicinity of Sixth and Collowhill streets. A ring at the bell brought a colored servant to the door, and the scribe invited to a seat in the parlor, while his card was taken up stairs.

Five minutes afterward a pleasant-faced lady attired in plain silk, unrelieved by adornments of any kind entered the parlor, and smilingly extended her hand, the fingers of which were black with India ink. After stating his business, the lady, after some hesitation, consented to talk on the subject, providing her name and residence were not published. "I have to maintain much secrecy," said the lady, "for many of my patrons belong to the best families." In answer to the query whether the practice was increasing the lady said: "A year or so ago business was dull, but now I have more than I can attend to."

"I do not know how I shall describe the operation," said the lady, "for I am not very apt at such things. But if I could so arrange it that you could see the *modus operandi* yourself, will you pledge me secrecy in case you know or recognize the patient?"

The scribe willingly gave his word to be mum, and he was taken into a room up stairs which adjoined the operating room, and where he could observe without being seen. The operating room bore the appearance of a dentist's office. A large, comfortable chair, in which an aspirant for tattooing honors was seated, stood by the only window in the apartment. The patient's leg was bare and exposed nearly to the knee, and from its appearance it was evident that the operation had been suspended when the lady came down to welcome the reporter. Work upon it was resumed without delay, and every time the needle pierced the skin the young woman winced perceptibly, and it was evident that the operation was a painful one. Several times the leg was jerked back convulsively, which drew out an angry command to "keep quiet." At last the work upon the cross was completed, and the young woman departed.

The next patient was a well-known leader of the demi-monde of this city, who had come to have the finishing touches placed on an elaborate design. She laughed and chatted through the operation, and before she left concluded to have the other limb decorated at an early day.

As soon as she had left, the India ink artist joined the reporter, saying: "Well, I am now ready to continue our interview."

Reporter—From what I have seen I am led to believe the operation a painful one. Am I correct?

Artist—To some it is, to others not. I have known some to faint while undergoing the tattooing, while others will laugh and joke throughout the entire operation, evincing no uneasiness whatever.

Reporter—Is not the practice injurious?

Artist—No. I have never heard of it being so at least. I knew of one young lady whose limb was inflamed and swollen for two or three days, so that it was impossible for her to use it; but the swelling went down, and since then she has experienced no trouble. But I did not wonder at this case.

Reporter—Why?

Artist—She wanted too much. She actually insisted in having tattooed on her limb, from the knee down, no less than eight devices, including monograms, crosses, half-moons, etc.

Reporter—Who are your best customers?

Artist—The demi-monde. Lately they have become almost crazy over it. Still I have quite a practice among respectable women. Speaking of the demi-monde's craze over the matter recalls a little incident. Last week I was called upon by one of them to tattoo the name of a well-known politician on her limb, which I did. The next day another woman of the same class called for the same purpose. I remarked to her the coincidence. Turning around in the chair, she said: "If any other woman bears his name, tattoo it on the bottom of my foot, so that I may express my contempt for him."

Reporter—What are your charges?

Artist—They range from $5 to $25, and for more elaborate designs as high as $50. Most of my customers, however, are of the $5 class, for which sum I will tattoo crosses, monograms and circles.

After declining an offer to tattoo his name on his arm, the reporter withdrew, thoroughly satisfied that the rumors of the practice of this art were not without foundation.—*Philadelphia Item.*

— There are forty-eight divorce cases on file in Dallas, Texas.

— Hon. Sam McLin, ex-Secretary of State of Florida, is dead.